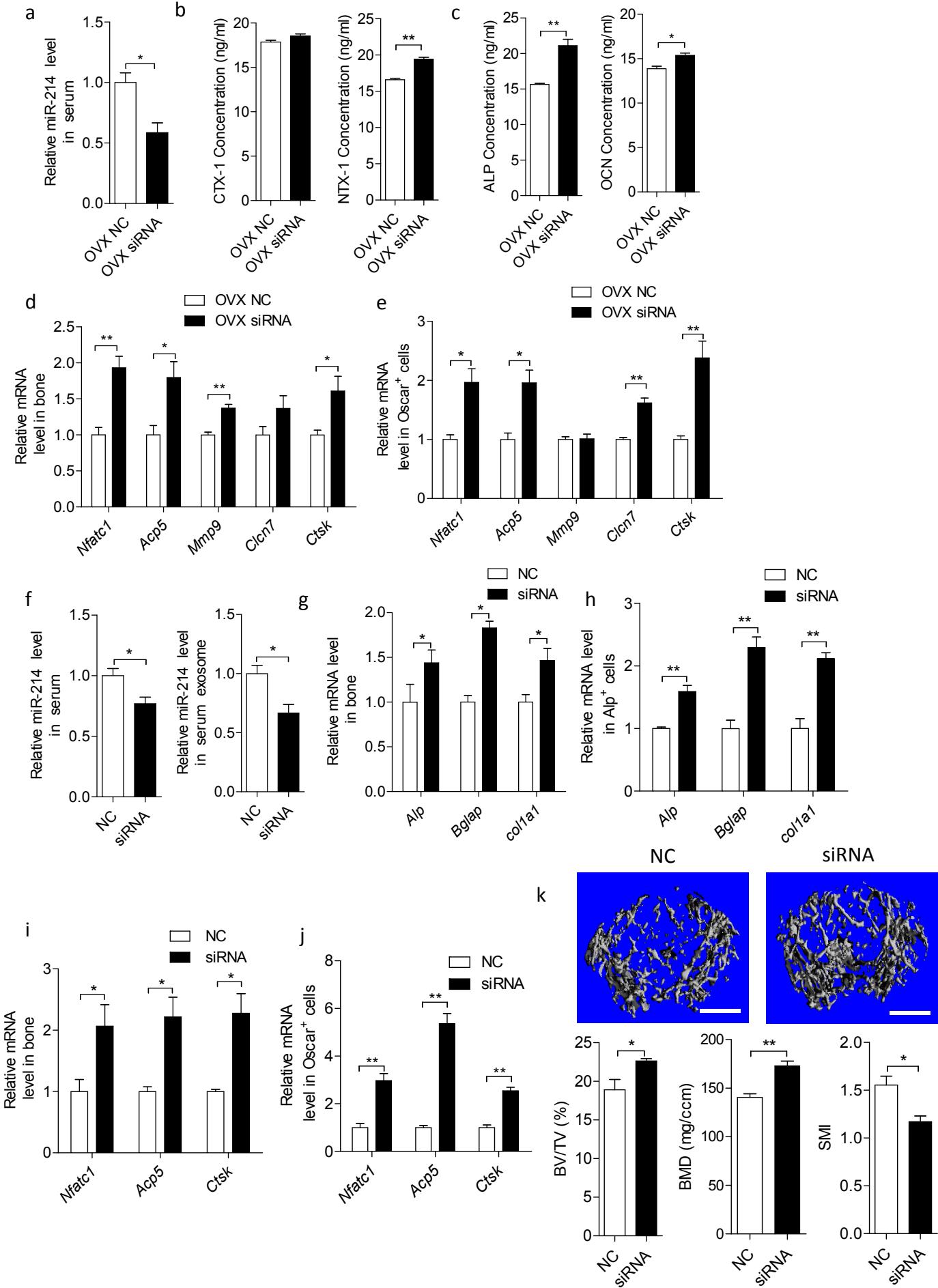


Supplementary Figure 9



Supplementary Figure 9 Inhibition of exosome release by down-regulation of Rab27a attenuates the inhibitory role of miR-214 on osteoblast activity *in vivo*.

(a) qRT-PCR analysis of miR-214 level in serum (normalized to cel-miR-39) from OVX NC and OVX siRNA mice. MiR-214 levels were normalized to *RNU6*. (b,c) ELISA analysis of serum CTX-1,NTX-1,ALP, OCN levels in OVX NC and OVX siRNA mice. (d,e) *Nfatc1*, *Acp5*, *Mmp9*, *Clcn7* and *Ctsk* mRNA levels in whole-bone tissues and Oscar⁺ cells of OVX NC and OVX siRNA mice were analyzed by qRT-PCR. OVX NC , n=4, OVX siRNA , n=4. (f) qRT-PCR analysis of miR-214 level in serum (normalized to cel-miR-39) and serum exosomes (normalized to *RNU6*) from NC and siRNA treated control mice. NC, control mice injected with *Rab27a* siRNA negative control; siRNA, control mice injected with *Rab27a* siRNA. (g) qRT-PCR analysis of *Alp*, *Bglap* and *Col1a1* mRNA in whole bone tissues of NC and siRNA mice. (h) qRT-PCR analysis of *Alp*, *Bglap* and *Col1a1* mRNA in *Alp*⁺ cells of NC and siRNA mice. (i) qRT-PCR analysis of *Nfatc1*, *Acp5* and *Ctsk* mRNA in whole bone tissues from NC and siRNA treated mice. (j) qRT-PCR analysis of *Nfatc1*, *Acp5* and *Ctsk* mRNA levels in Oscar⁺ cells from NC and siRNA treated mice. (k) Representative images showing three-dimensional trabecular architecture by microCT reconstruction in the distal femurs. BV/TV, the ratio of bone volume to tissue volume. BMD, Bone Mineral Density, SMI, Structure Model Index. Scale bars, 1 mm. The data represent the mean \pm SEM of three independent experiments. * $P<0.05$, ** $P<0.01$.